**Ecological Impacts of Climate Change**  Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Today’s Objective: Investigate how climate change is impacting different ecoregions of the world and specific species living in those regions. Choose at least five of the eleven ecoregions to investigate. (See the table below for the corresponding grading scales.)

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| --- | --- | --- | --- |
| 72%-79% | 80%-87% | 88%-96% | 96%-100% |
| 4 Regions | 5 Regions | 6 Regions | 7+ Regions |

**EcoRegions To Choose From:**

1. **The Caribbean** Ecoregion includes the Caribbean Sea, the Gulf of Mexico, and part of the Atlantic Ocean.
2. **The Desert Arid** Ecoregion includes the Mojave, Sonoran, Great Basin, and Chihuahuan deserts, as well as the Colorado River and Rio Grande basins and the surrounding mountain ranges.
3. **The Eastern Coastline** Ecoregion extends from Florida’s beaches, barrier islands, bays, estuaries, and tidal marshes, to the colder reaches and rocky coastline of Maine.
4. **The Eastern Forests and Woodlands** Ecoregion encompasses the rugged Adirondack Mountains in New York and the Appalachian Mountains that span the entire eastern seaboard, to rolling hills, valleys, and plains.
5. **The Great Lakes** Ecoregion includes Lake Michigan, Lake Erie, Lake Huron, Lake Superior, and Lake Ontario.
6. **The Gulf Coast** Ecoregion stretches in an arc from the tip of Florida to the tip of Texas, passing through the southern areas of Louisiana, Alabama, and Mississippi.
7. **The Pacific Islands** Ecoregion includes the State of Hawai’i, and territories and jurisdictions such as, the territories of Guam and American Samoa, the Commonwealth of the Northern Mariana Islands, the Republic of Palau, and the Federated States of Micronesia and the Republic of the Marshall Islands.
8. **The Polar/Subpolar** Ecoregion is composed of the vast, deep, ice-covered Arctic Ocean, surrounded by the continental land masses that include Alaska, Northern Canada, and Eurasia.
9. **The Prairie Grasslands** Ecoregion begins with the Great Plains at the eastern edge of the Rocky Mountains and extends all the way to the Appalachian Mountains in the eastern part of the country.
10. **The Western Coastline** Ecoregion includes the coastal zone that stretches from southern California through Oregon, Washington, and up to southern Alaska.
11. **The Western Forests and Mountains** Ecoregion stretches east from the Sierra Nevada and Cascade Ranges to the Rocky Mountains.

**Region: Great Lakes (EXAMPLE)**

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| **Description**  Where is this region? What would you see if you visited this region? | * Located between Canada and the United States * Formed by glaciers * Conifer and Deciduous Trees * Trout, Salmon, Grey Wolf, Black Bear, Peregrine Falcon, and Bald Eagle * Farms (fertile soils) and Cities (Chicago) |
| **Impact**  How is climate change impacting this region? | * Will become warmer and drier * Increased heavy rainfall in some areas (river-flooding) * Species migration (tree species and trout need colder temperatures) * Domination by deciduous species (Sugar Maple) * Changes in bird migrations placing risk on certain birds (scarlet tanagers, warblers, flycatchers, etc.) |
| **Species**  What species is highlighted in this region? How is climate change impacting this species? | Lake Trout (*Salvelinus namaycush*)   * Threatened by invasive species, pollution, and overfishing * Climate change will reduce coldwater habitat and allow for other invasives and other natives to thrive (sea lamprey and smallmouth bass) and compete for resources. |
| **Response**  What is being done in this region in response to climate change? | * Restoring native plants * Following catch limits and minimizing motor powered boats on lakes * Green Acres Project---local project to encourage use of native plants and minimize runoff problems * Native plants do not require as much water (deep root systems) and do not require mowing while also providing habitat for wildlife |

Region \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- |
| **Description**  Where is this region? What would you see if you visited this region? |  |
| **Impact**  How is climate change impacting this region? |  |
| **Species**  What species is highlighted in this region? How is climate change impacting this species? |  |
| **Response**  What is being done in this region in response to climate change? |  |

Region \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **Description**  Where is this region? What would you see if you visited this region? |  |
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